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<120> TRANSCRIPTIONAL CONTROL ELEMENT, CHIMERIC CONSTRUCTS  
AND USES THEREFOR

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<170> PatentIn Ver. 3.3

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<210> 3

<211> 146

<212> PRT

<213> Taro bacilliform virus

<400> 3

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Arg Arg Ala Asp Leu Ser Tyr Leu Asp Leu Ala Thr Thr Thr Lys Pro
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Ser Ala Ser Gln Leu Ala His Asn Leu Gln Val Ile Phe Asp Arg Leu
    35                      40                      45

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Ser Leu His Ser Ser Val Ser Ile Lys Glu His Tyr Glu Val Val Ser  
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 Lys Leu His Ser Ser Leu Glu Lys Ser Ile Glu Glu Leu Lys Ser Glu Leu  
 65 70 75 80  
 Thr Thr Val Lys Arg Ala Leu Thr Ser Ile Gln Lys Glu Val Phe Thr  
 85 90 95  
 His Lys Pro Leu Thr Ala Gln Glu Val Gln Thr Leu Ala Gln Ser Leu  
 100 105 110  
 Ile Lys Glu Pro Lys Gln Ile Glu Gln Gln Ala Val Phe Leu Leu Lys  
 115 120 125  
 Glu Leu Lys Glu Gln Thr Ala Lys Ile Gln Ala Leu Leu His Glu Leu  
 130 135 140  
 Lys Ser  
 145

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 <211> 144  
 <212> PRT  
 <213> Taro bacilliform virus

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 Glu Thr Lys Val Leu Gly Asp Pro Ser Val Gly Phe Ser Glu Ile Pro  
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 Thr Thr Ala Ile Gly Thr Ala Thr Gly Phe Ser Thr Leu Tyr Lys Gln  
 35 40 45  
 Asn Asn Thr Ile Ile Asn Leu Leu Ile Ser Leu His Lys Lys Val Asp  
 50 55 60  
 Ser Leu Ser Lys Lys Thr Asp Val Asp Glu Leu Ala Thr Glu Leu Ser  
 65 70 75 80  
 Lys Leu Thr Ile Lys Asp Thr Pro Lys Val Lys Ala Lys Thr Pro Leu  
 85 90 95  
 Tyr Val Phe Lys Ser Pro Arg Leu Ile Leu Glu Glu Glu Arg Tyr Lys  
 100 105 110  
 Ile Gly Leu Pro Pro Thr Thr Thr Asp Trp Thr Trp Pro Val Gly His  
 115 120 125  
 Pro Phe Ala Pro Pro Pro Lys Thr Ser Thr Lys Ala Ser Thr Ser Ser  
 130 135 140

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 <211> 1881  
 <212> PRT  
 <213> Taro bacilliform virus

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                   20                  25                  30  
 Arg Val Arg His Thr Ala Glu Arg Ala Ala Arg Arg Ile Phe Pro Gly  
                   35                  40                  45  
 Arg Phe Asn Arg Thr Leu Glu Ser Gln Ile Asn Pro Glu Ala Glu Ile  
                   50                  55                  60  
 Arg Leu Ser Gln Gln Arg Arg Ala Ala Met Val Pro Ala Glu Val Leu  
                   65                  70                  75                  80  
 Tyr Asn Thr Ser Pro Ser Thr Arg Asn Gln Lys Val Tyr Gln His Tyr  
                   85                  90                  95  
 Ser Glu Glu Arg Ile Leu Cys Thr Gly Gln Asn Gln Gln Leu Asn Leu  
                   100                  105                  110  
 Pro Phe Ile Asn Glu Ser Ser Tyr Arg Ala Leu Arg Glu Ser Gly Gln  
                   115                  120                  125  
 Gln His Leu His Ile Gly Leu Ile Met Ile Arg Val His Pro Leu His  
                   130                  135                  140  
 Arg Arg Asn Ala Gly Thr Thr Ala Leu Ile Val Pro Arg Asp Ile Arg  
                   145                  150                  155                  160  
 Trp Asn Asp Asp Arg Ser Ile Ile Gly Thr Met Glu Ile Asp Leu Ser  
                   165                  170                  175  
 Ala Gly Ser Gln Ile Val Tyr Ile Ala Pro Asn Ile Met Leu Ser Val  
                   180                  185                  190  
 Glu Asp Phe Tyr Arg Asn Ile Gln Leu Ala Ile Gln Thr Gln Gly Tyr  
                   195                  200                  205  
 Glu Asn Trp Asn Ser Ala Glu Ser Asn Leu Leu Ile Ser Arg Ala Leu  
                   210                  215                  220  
 Ile Gly Arg Leu Thr Asn Asp Ser Phe Thr Gly Phe Gln Tyr Asn Ile  
                   225                  230                  235                  240  
 Ser Asn Val Ala Glu Tyr Leu His Ser His Gly Val Gln Ala Ile Glu  
                   245                  250                  255  
 Gly Gln Ala His Pro Arg Thr Leu Gly Asn Arg Trp Ile Leu Gln Ala  
                   260                  265                  270

Pro Ala Pro Pro Arg Ser Leu Val Pro Gln Asn Val Glu Thr Thr Thr  
 275 280 285  
 Leu Leu Asp Gly Asn Val Ser Ile Arg Phe Ser Asn Tyr His Gln Ala  
 290 295 300  
 Pro Val Asn Asp Thr Gln Asp Asn Ser His Pro Asp Ile Gln Glu Asp  
 305 310 315 320  
 Glu Asn Gln Phe Ile Gly Phe Leu Ser Asp Leu Gly Glu Glu Tyr Glu  
 325 330 335  
 Leu Glu Tyr Pro Ser Phe Thr Pro Val His Ala Asp Glu Phe Ile Phe  
 340 345 350  
 Ile Ile Ile Asn Gly Glu Glu Ile Pro Asp Asp Phe Val Ser Ser Phe  
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 Cys Ser Asn Phe Ser Pro Pro Pro Ile Pro Glu Pro Glu Pro Thr Ala  
 370 375 380  
 Ile Glu Glu Thr Ala Phe Thr Leu Glu Glu Gln Phe Asn Asp Leu Asp  
 385 390 395 400  
 Tyr Pro Thr Leu Ile Ser Met Glu Lys Gln Leu Val Gln Ser Ser Val  
 405 410 415  
 Thr Ser Ala Tyr Asn Pro Pro Thr Glu Pro Leu Met Gly Gln Val Val  
 420 425 430  
 Tyr Pro Pro Ala Ser Ala Pro Arg Pro Gln Ala Glu Thr Ser Ser Thr  
 435 440 445  
 Ser Glu Arg Phe Lys Asn Phe Arg Ala Lys Pro Tyr Ser Thr Pro Thr  
 450 455 460  
 Ile Phe Leu Pro Pro Ala Tyr Asn Gln Gln Gly Ala Ile Leu Val Leu  
 465 470 475 480  
 Pro Asp Asp Ile Gly Leu Tyr Glu Asp Thr Ile Ser Arg Trp Glu Ser  
 485 490 495  
 Ile Thr Leu Asn Met Met Asn Glu Lys Val Trp Pro Ser Asn Glu Ala  
 500 505 510  
 Lys Ala Lys Tyr Met Glu Asn Leu Leu Gly Glu Met Glu Lys Lys Thr  
 515 520 525  
 Trp Ile Gln Trp Arg Thr Thr Tyr Val Ser Glu Tyr Asp Ala Leu Val  
 530 535 540  
 Gln Gln Ser Asp Glu Thr Gln Asn Leu Leu Ser Gln Val Arg Arg Ile  
 545 550 555 560  
 Phe Leu Leu Gln Asp Pro Tyr Gln Gly Ser Thr Ala Glu Gln Asp Gln  
 565 570 575



Ala	Tyr	Asn	Asp	Leu	Glu	Arg	Ile	Ser	Cys	Asp	Asn	Ile	Lys	Asp	Leu	580	585	590	
Ile	Pro	Tyr	Leu	Ile	Gln	Phe	Arg	Asn	Leu	Ala	Ala	Lys	Ser	Gly	Arg	595	600	605	
Leu	Phe	Leu	Gly	Pro	Glu	Leu	Ser	Glu	Lys	Leu	Phe	Arg	Lys	Met	Pro	610	615	620	
Pro	Leu	Ile	Gly	Lys	Glu	Ile	Glu	Thr	Ala	Phe	Ile	Ala	Lys	His	Gly	625	630	635	640
Asn	Ala	Asn	Ile	Thr	Val	Met	Pro	Arg	Ile	His	Phe	Ala	Tyr	His	Tyr	645	650	655	
Leu	Ala	Glu	Leu	Cys	Lys	Lys	Ala	Ala	Leu	Gln	Arg	Ser	Leu	Lys	Asp	660	665	670	
Leu	Ser	Phe	Cys	Asn	Gln	Ile	Pro	Leu	Pro	Gly	Ile	Tyr	Thr	Lys	Gly	675	680	685	
Asn	Lys	Lys	Phe	Gly	Leu	Arg	Lys	Ala	Arg	Thr	Tyr	Lys	Gly	Lys	Pro	690	695	700	
His	Pro	Thr	His	Val	Arg	Val	Phe	Lys	Lys	Ala	Lys	Tyr	Gln	Arg	Thr	705	710	715	720
Lys	Lys	Cys	Lys	Cys	Phe	Ile	Cys	Gly	Glu	Pro	Gly	His	Phe	Ala	Arg	725	730	735	
Glu	Cys	Thr	Lys	Gln	Arg	Gly	Asn	Ile	Val	Arg	Ala	Thr	Val	His	Gln	740	745	750	
Glu	Leu	Ala	Ile	Pro	Asp	Asn	Phe	Asp	Val	Val	Ser	Val	Asp	Ala	Asp	755	760	765	
Glu	Ser	Asp	Ser	Ser	Gly	Ile	Tyr	Ser	Tyr	Ser	Glu	Asn	Glu	Ala	Pro	770	775	780	
Leu	Gln	Glu	Val	Asn	Ser	Phe	Ile	His	Asp	Glu	Asn	Ile	Phe	Phe	Leu	785	790	795	800
Ser	Asp	Ala	Asp	Glu	Phe	Glu	Ser	Pro	Gln	Gln	His	Leu	His	Glu	Thr	805	810	815	
Val	Asn	Met	Leu	Gln	Ser	Arg	Ser	Ala	Tyr	Leu	Pro	Gln	Val	Ala	Val	820	825	830	
Gly	Glu	Glu	Lys	Leu	Asn	Cys	Ser	His	Ile	Trp	Leu	Gln	Asp	Val	Asp	835	840	845	
Ile	Pro	Ser	Asp	Lys	His	Lys	Cys	His	Thr	Cys	Arg	Arg	Asp	Thr	Gln	850	855	860	
Lys	His	Tyr	Arg	Leu	Glu	Cys	Gln	Lys	Cys	Lys	Phe	Leu	Val	Cys	Ser	865	870	875	880

Leu	Cys	Thr	Ile	Pro	Tyr	Leu	Gly	Ile	Thr	Met	Gln	Phe	Arg	Gln	Lys	885	890	895
Gln	Lys	Ser	Gln	Pro	Glu	Asn	Pro	Asn	Leu	Val	Arg	Glu	Leu	Leu	Glu	900	905	910
His	Ala	Ile	Phe	Leu	Glu	Glu	Lys	Cys	Lys	Asn	Gln	Glu	Leu	Leu	Ser	915	920	925
Glu	Thr	Gln	Ile	Glu	Arg	Ile	Val	Ser	Ser	Glu	Lys	Gln	Val	Lys	Phe	930	935	940
Tyr	Gly	Ile	Leu	Pro	Thr	Lys	Lys	Ser	Asn	Lys	Ser	Ala	Gly	Tyr	Asp	945	950	955
Leu	Gln	Ser	Asn	Ile	Asp	Ile	Glu	Ile	Pro	Pro	Gly	Lys	Cys	Thr	Val	965	970	975
Ile	Ser	Thr	Gly	Thr	Phe	Leu	Gln	Met	Pro	Asp	Asn	Met	Tyr	Gly	Arg	980	985	990
Leu	Val	Glu	Arg	Thr	Ser	Leu	Ala	Ile	Gln	Gly	Ile	Thr	Val	Gln	Gly	995	1000	1005
Gly	Val	Ile	Asp	Pro	Asp	Phe	Thr	Gly	Glu	Ile	Gln	Ile	Val	Leu	Phe	1010	1015	1020
Asn	His	Asn	Thr	Ala	Pro	Tyr	Pro	Val	Lys	Lys	Thr	Tyr	Arg	Leu	Ala	1025	1030	1035
Gln	Ile	Ile	Phe	Glu	Lys	Phe	Tyr	Thr	Pro	Ile	Phe	Ile	Gln	Glu	Pro	1045	1050	1055
Phe	Thr	Ser	Thr	Gln	Gln	Gly	Ser	Ser	Asn	Phe	Gly	Ser	Thr	Ala	Lys	1060	1065	1070
Pro	Leu	Gln	Ile	Thr	Glu	Asn	Ile	Glu	Val	Met	Ser	Glu	Thr	Val	Ala	1075	1080	1085
Asn	Gln	Val	Ala	Lys	Ser	Ser	Val	Leu	Pro	Arg	Leu	Tyr	Ser	Ile	Gln	1090	1095	1100
Ala	His	Ile	His	Ile	Ala	Pro	Asp	Ile	Val	Ile	Ser	Thr	Thr	Ala	Ile	1105	1110	1115
Ile	Asp	Thr	Gly	Ala	Thr	Val	Cys	Cys	Ile	Ser	Glu	Lys	Ile	Val	Pro	1125	1130	1135
Glu	Ala	Ala	Lys	Glu	Gln	Leu	Asn	Tyr	Lys	Val	Asn	Ile	Ser	Gly	Ile	1140	1145	1150
Ser	Ser	Gln	Gln	Gln	Ile	Gln	His	Arg	Leu	Lys	Arg	Gly	Thr	Leu	Glu	1155	1160	1165
Ile	Ala	Ser	Asn	Lys	Tyr	Ala	Leu	Pro	Leu	Cys	Tyr	Ile	Ile	Glu	Leu	1170	1175	1180

Asn Asp Lys Asp Asp Phe Ser Met Ile Leu Gly Cys Asn Phe Phe Lys  
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 His Met Gly Gly Gly Met Arg Phe Glu Gly Pro His Val Thr Phe Tyr  
 1205 1210 1215  
 Lys Gly Ile Thr Thr Leu Ser Thr Ser Tyr Ala Asn Thr Gly Ile Asp  
 1220 1225 1230  
 Thr Glu His Glu Gln Ile Thr Ser Thr Thr Ser Gln Ser Phe Lys Glu  
 1235 1240 1245  
 Arg Phe Ser Pro Leu Met Asn Glu Leu Lys Ala Ala Gly Tyr Ile Gly  
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 Glu Asp Pro Leu Lys His Trp Ser Lys Asn Lys Val Thr Cys Lys Leu  
 1265 1270 1275 1280  
 Asp Leu Lys Asn Thr Glu Ile Thr Ile Gln Asp Lys Pro Leu Arg His  
 1285 1290 1295  
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 Ala Phe Leu Val Asn Ser Gly Thr Thr Val Thr Ala Asp Gly Lys Glu  
 1330 1335 1340  
 Ile Lys Gly Lys Glu Arg Met Val Phe Asn Tyr Lys Ala Leu Asn Asp  
 1345 1350 1355 1360  
 Asn Thr Tyr Lys Asp Gln Tyr Ser Leu Pro Asn Ile Gln Leu Ile Leu  
 1365 1370 1375  
 Lys Lys Val Ile Asn Ser Thr Ile Tyr Ser Lys Phe Asp Leu Lys Ser  
 1380 1385 1390  
 Gly Phe His Gln Val Ala Met Asp Pro Asp Ser Val Glu Trp Thr Ala  
 1395 1400 1405  
 Phe Leu Val Pro Gln Gly Leu Tyr Glu Trp Leu Ala Met Pro Phe Gly  
 1410 1415 1420  
 Leu Lys Asn Ala Pro Ala Val Phe Gln Arg Lys Met Asp Ala Val Phe  
 1425 1430 1435 1440  
 Lys Gly Cys Glu Lys Phe Leu Ala Val Tyr Ile Asp Asp Ile Leu Val  
 1445 1450 1455  
 Phe Ser Asn Asn Glu Glu Asp His Ala Lys His Leu Val Ile Met Leu  
 1460 1465 1470  
 Gln Arg Cys Lys Glu His Gly Leu Val Leu Ser Pro Thr Lys Met Asn  
 1475 1480 1485

Ile Ala Val Arg Glu Val Asn Phe Leu Gly Ala Thr Ile Gly Ser Arg  
 1490 1495 1500  
 Lys Val Lys Leu Gln Glu Asn Ile Ile Lys Lys Ile Leu Asp Phe Asp  
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 Thr Glu Lys Leu Gln Ser Lys Lys Gly Leu Arg Ser Phe Leu Gly Ile  
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 1540 1545 1550  
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 1570 1575 1580  
 Pro Pro Leu Asp Tyr Pro Pro Glu Gln Ala Tyr Ile Ile Ile Glu Ser  
 1585 1590 1595 1600  
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 Lys Phe Ser Pro Ile Lys Ser Thr Ile Asp Ala Glu Ile Thr Ala Ala  
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 Thr Ser Val Asn Lys Pro Ser Arg Val Arg Trp Leu Lys Phe Ile Asp  
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 Tyr Ile Thr Asn Thr Gly Ile Asp Val Lys Phe Glu His Ile Asp Ala  
 1700 1705 1710  
 Lys Asn Asn Val Leu Ala Asp Thr Leu Ser Arg Leu Val Asn Thr Leu  
 1715 1720 1725  
 Gln Asp Leu Pro Trp Leu Asp Glu Pro His Gln Asp Gln Thr Val Ser  
 1730 1735 1740  
 Leu Met Gln Glu Ile Glu Asp Ala Pro Leu Glu Ile Lys Gln Arg Ser  
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 Leu Thr Cys Leu Gln Arg Leu Ile Cys Arg Ser Phe Met Glu Asp Ser  
 1765 1770 1775  
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 1780 1785 1790

Ala Glu Ser Ser Thr Pro Ile Thr Leu Asp Glu Phe Ser Arg Lys Arg  
 1795 1800 1805

Phe Gln Glu His Thr Asp Leu Leu Glu Glu Phe Gln Leu Thr Leu Leu  
 1810 1815 1820

Gln Ile Asn Leu Leu Glu Ala Ser Leu His Glu Arg Leu Met Lys Cys  
 1825 1830 1835 1840

Gln Ser Tyr Ala Thr Arg Asp Asn Phe Trp Gly Asp Trp Leu Pro Glu  
 1845 1850 1855

Ala Arg Arg Asp Leu Leu Gln Ile Gln Leu Ala Lys Glu Ile Ile Glu  
 1860 1865 1870

Lys Val Arg Glu Lys Leu His Ser Ile  
 1875 1880

<210> 6

<211> 1190

<212> DNA

<213> Taro bacilliform virus

<400> 6

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taacactttg caggatttgc catggctaga tgaacctcat caggatcaaa cagtctccct 180
gatgcaggaa attgaagatg cacctcttga aatcaagcag cgttctttaa cctgcttaca 240
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<210> 7

<211> 598

<212> DNA

<213> Taro bacilliform virus

<400> 7

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aaaagcagat gccatcaact ttattcgagt tgagcctcgg ggagccgctc gtttaaagat 240
gctcttttga aaatgacagc gcgtgggtgc atgtcattct caccttttct ttaatgcgtc 300
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ggccaccgac tgcattattg agattctctt atccctttgc cacctcatcg gttgcattat 360
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ccctcagaag aacggcaagc cggaaacacc gaacttccca ttcttctctt gagtctttcc 480
tttgagcttg agcttgtgtg taatctttca tagtttctaa gtctccgaag aacgagcacc 540
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<210> 8
<211> 529
<212> DNA
<213> Taro bacilliform virus

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tgccatcaac tttattcgag ttgagcctcg gggagccggt cgtttaaaga tgctcttttg 180
aaaatgacag cgcgtggtgc gatgtcattc tcaccttttc tttaatgcgt cggccaccga 240
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gagcttgtgt gtaatctttc atagtttcta agtctccgaa gaacgagcac cgtctcgtga 480
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<210> 9
<211> 261
<212> DNA
<213> Taro bacilliform virus

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ccattcttct cttgagctct tcctttgagc ttgagcttgt gtgtaatctt tcatagtctc 180
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12